

## CLAIMS

5        **What Is Claimed Is:**

1.        A data transmission system using N-dimensional information, wherein the N-dimensional information comprises:

basic information unit File\_f information comprised of at least two layer

10      information combinations among a top layer information T\_f information, a middle layer information M\_f.n information related to the T\_f information, and a bottom layer information B\_f information related to the T\_f information or the M\_f.n information;

      a data structure of the N-dimensional information comprised of the File\_f information; and

15      a storage for storing the data structure of the N-dimensional information.

2.        The data transmission system according to claim 1, wherein the top layer information T\_f information is composed of information that is created by a

20      keyboard/keypad or biometric terminals comprised in a Client system and Server System, respectively, and accessed through code information generated by the keyboard/keypad input or through biometric information of the client acquired from the biometric terminals;

      wherein the middle layer information M\_f.n information is composed of n-

25      dimensionally related middle layer information from M\_f.1 information to M\_f.n

information, the  $M_{f,1}$  information being lower layer information related to the top layer information  $T_f$  information and the  $M_{f,n}$  information being upper layer information of the  $B_f$  information and  $M_{f,n-1}$  information being upper layer information of the  $M_{f,n}$  information, and used as a variable for an encryption

5 processing based on the N-dimensional information; and

wherein the  $B_f$  information is composed of authentication information the client registers to the DB of the Server System.

10 3. A data transmitting methods using N-dimensional information, wherein an authentication processing of Server System comprises the steps of:

randomly extracting N-dimensional  $T_f$  information to create combined information and transmitting the combined information to Client System;

15 searching lower layer information  $M_{f,n}$  combined information related to the transmitted  $T_f$  combined information;

applying to the authentication information registered by a client an encryption processing using the searched  $M_{f,n}$  combined information as a variable to create encrypted information; and

if the encrypted information corresponds with the authentication information  
20 from the client , authenticating the client.

4. A data transmitting methods using N-dimensional information, wherein an authentication processing of Client System comprises the steps of:

25 receiving N-dimensional  $T_f$  combined information from Server System;

searching a portable storage or storage device for lower layer information M\_f.n combined information related to the received T\_f combined information; and

5 applying to authentication information a client needs to transmit an encryption processing using the searched M\_f.n combined information as a variable to create the encrypted information, and transmitting the encrypted information being created to Server System.

5. A data transmitting methods using N-dimensional information, wherein a  
10 method for transmitting/receiving encrypted information between Client Systems that share N-dimensional T\_f information and M\_f.n information comprises the steps of:

randomly extracting N-dimensional T\_f information to create combined information, and transmitting the combined information to another Client System for sharing;

15 searching lower layer information M\_f.n combined information related to the T\_f combined information being shared;

applying to information a client needs to transmit an encryption processing using the searched M\_f.n combined information as a variable to create encrypted information, and transmitting the encrypted information to the client; and

20 applying to the information the client received a decryption processing using the searched M\_f.n combined information as a variable to create decrypted information.